7

(FILE 'HOME' ENTERED AT 08:48:06 ON 12 SEP 2005)

FILE 'REGISTRY' ENTERED AT 08:48:12 ON 12 SEP 2005

L1 2 S DITHIODINICOTINIC

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS, USPATFULL' ENTERED AT 08:49:20 ON 12 SEP 2005

L2 271 S L1

L3 4 S L2 AND (NK OR (NATURAL KILL?))

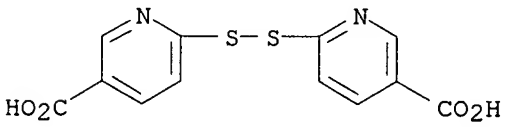
L4 4 DUP REM L3 (0 DUPLICATES REMOVED)

L5 18 S L2 AND IMMUNO?

L6 20 S L2 AND IMMUN?

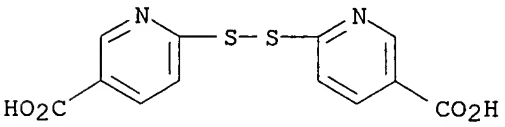
L7 19 DUP REM L6 (1 DUPLICATE REMOVED)

L1 ANSWER 1 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 35879-52-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN 3-Pyridinecarboxylic acid, 6,6'-dithiobis-, sodium salt (9CI) (CA INDEX NAME)
OTHER NAMES:
CN **6,6'-Dithiodinicotinic acid sodium salt**
MF C12 H8 N2 O4 S2 . x Na
LC STN Files: CA, CAPLUS, IFICDB, IFIPAT, IFIUDB, TOXCENTER, USPATFULL
CRN (15658-35-2)



3 REFERENCES IN FILE CA (1907 TO DATE)
3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L1 ANSWER 2 OF 2 REGISTRY COPYRIGHT 2005 ACS on STN
RN 15658-35-2 REGISTRY
ED Entered STN: 16 Nov 1984
CN 3-Pyridinecarboxylic acid, 6,6'-dithiobis- (9CI) (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN Nicotinic acid, 6,6'-dithiodi- (8CI)
OTHER NAMES:
CN **6,6'-Dithiodinicotinic acid**
CN 6,6'-Dithionicotinic acid
CN Carboxypyridine disulfide
CN CPDS
CN NSC 147758
FS 3D CONCORD
MF C12 H8 N2 O4 S2
CI COM
LC STN Files: AGRICOLA, BEILSTEIN*, BIOBUSINESS, BIOSIS, BIOTECHNO, CA, CANCERLIT, CAPLUS, CASREACT, CHEMCATS, CHEMLIST, CIN, CSCHEM, EMBASE, IFICDB, IFIPAT, IFIUDB, MEDLINE, PHAR, PROUSDDR, RTECS*, SYNTHLINE, TOXCENTER, USPAT2, USPATFULL
(*File contains numerically searchable property data)
Other Sources: EINECS**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

148 REFERENCES IN FILE CA (1907 TO DATE)
7 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
148 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L4 ANSWER 1 OF 4 USPATFULL on STN
AN 2004:334250 USPATFULL
TI Method of immunomodulation using thione-forming disulfides
IN Grassetti, Davide R., Jamestown, CA, UNITED STATES
Moro, Camillo, Padova, ITALY
PI US 2004265327 A1 20041230
AI US 2002-44463 A1 20020110 (10)
PRAI US 2001-260943P 20010110 (60)
DT Utility
FS APPLICATION
LREP Davide R Grassetti, 1980 Peppermint Falls Road, Jamestown, CA, 95327
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 1792
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides for the methods of modulating an immune response in an individual by administration of a thione-forming disulfide (TFD). Immunomodulatory responses include, but are not limited to, increased **natural killer** cell activity, expansion of **NK** cell population, decreased B cell population, decreased antibody production, and increased mitogenic potential. Methods of modulating such immune responses and the uses of immunomodulation are provided herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:539531 CAPLUS
DN 137:103886
TI Method of immunomodulation using thione-forming disulfides
IN Grassetti, Davide R.; Moro, Camillo
PA USA
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002055080	A2	20020718	WO 2002-US795	20020110
	WO 2002055080	A3	20031204		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1383499	A2	20040128	EP 2002-705749	20020110
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
	US 2004265327	A1	20041230	US 2002-44463	20020110
PRAI	US 2001-260943P	P	20010110		
	WO 2002-US795	W	20020110		

OS MARPAT 137:103886
AB The invention discloses the methods of modulating an immune response in an individual by administration of a thione-forming disulfide (TFD). The thione-forming disulfide compds. R-S-S-R (R= aromatic heterocycle with neg. substituents, cyclic group having at least one 5 or 6 membered heterocycle ring with each ring with at least one nitrogen and optionally N, O or S; R comprises a pyridinyl, pyrimidinyl, thiazolyl or quinolinyl group). Immunomodulatory responses include, increased **natural killer** cell activity, expansion of **NK** cell population, decreased B cell population, decreased antibody production, and increased

mitogenic potential. Methods of modulating such immune responses and the uses of immunomodulation are also provided.

L4 ANSWER 3 OF 4 USPATFULL on STN
AN 89:54097 USPATFULL
TI Certain pyridyl derivatives useful as leukotriene antagonists
IN Young, Robert N., Senneville, Canada
Rokach, Joshua, Chomedey, Canada
PA Merck Frosst Canada, Inc., Kirkland, Canada (non-U.S. corporation)
PI US 4845108 19890704
AI US 1987-15824 19870217 (7)
RLI Division of Ser. No. US 1984-645596, filed on 30 Aug 1984, now patented, Pat. No. US 4666928
DT Utility
FS Granted
EXNAM Primary Examiner: Rotman, Alan L.
LREP Lopez, Gabriel, Pfeiffer, Hesna J.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1,9
DRWN No Drawings
LN.CNT 718
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds having the formula: ##STR1## are antagonists of leukotrines of C.sub.4, D.sub.4 and E.sub.4, the slow reacting substance of anaphylaxis. These compounds are useful as anti-asthmatic, anti-allergic and anti-inflammatory agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L4 ANSWER 4 OF 4 USPATFULL on STN
AN 87:36108 USPATFULL
TI Propylphenoxy pyridine carboxylates as leukotriene antagonists
IN Young, Robert N., Senneville, Canada
Rokach, Joshua, Laval, Canada
PA Merck Frosst Canada, Ind., Kirkland, Canada (non-U.S. corporation)
PI US 4666928 19870519
AI US 1984-645596 19840830 (6)
DT Utility
FS Granted
EXNAM Primary Examiner: Rotman, Alan L.
LREP Lopez, Gabriel, Pfeiffer, Hesna J., Ginsburg, Paul H.
CLMN Number of Claims: 9
ECL Exemplary Claim: 1,9
DRWN No Drawings
LN.CNT 873
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compounds having the formula: ##STR1## are antagonists of leukotrines of C.sub.4, D.sub.4 and E.sub.4, the slow reacting substance of anaphylaxis. These compounds are useful as anti-asthmatic, anti-allergic and anti-inflammatory agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 1 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2004:162826 CAPLUS
DN 140:217515
TI Crosslinkers with high reactivity and solubility and their use in the preparation of conjugates for targeted delivery of small molecule drugs
IN Widdison, Wayne Charles
PA Immunogen, Inc., USA
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004016801	A2	20040226	WO 2003-US22494	20030805
	WO 2004016801	A3	20040701		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2495795	AA	20040226	CA 2003-2495795	20030805
	US 2004039176	A1	20040226	US 2003-633616	20030805
	US 6913748	B2	20050705		
	EP 1542723	A2	20050622	EP 2003-788251	20030805
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	US 2002-403652P	P	20020816		
	WO 2003-US22494	W	20030805		

OS MARPAT 140:217515
AB Disclosed is a method of making conjugates of cell binding agents and small mol. drugs comprising reacting a cell binding agent with a bifunctional crosslinking moiety to thereby provide the cell binding agent with a reactive disulfide group and then reacting the modified cell binding agent with a small mol. drug comprising a free thiol group. Bifunctional crosslinking moieties are also disclosed. For example, N-sulfosuccinimidyl 4-(5-nitro-2-pyridyldithio)-pentanoate was synthesized by esterifying 4-mercaptopentanoic acid converted from 1,3-dibromobutane with N-hydroxysulfosuccinimide, and then was effectively conjugated with murine monoclonal IgG1 N901 and maytansinoid DM1.

L7 ANSWER 2 OF 19 USPATFULL on STN
AN 2004:334250 USPATFULL
TI Method of **immunomodulation** using thione-forming disulfides
IN Grassetti, Davide R., Jamestown, CA, UNITED STATES
Moro, Camillo, Padova, ITALY
PI US 2004265327 A1 20041230
AI US 2002-44463 A1 20020110 (10)
PRAI US 2001-260943P 20010110 (60)
DT Utility
FS APPLICATION
LREP Davide R Grassetti, 1980 Peppermint Falls Road, Jamestown, CA, 95327
CLMN Number of Claims: 24
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 1792
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides for the methods of modulating an **immune** response in an individual by administration of a thione-forming disulfide (TFD). **Immunomodulatory** responses include, but are not limited to, increased natural killer cell activity, expansion of NK cell population, decreased B cell population, decreased antibody

production, and increased mitogenic potential. Methods of modulating such **immune** responses and the uses of **immunomodulation** are provided herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 3 OF 19 USPATFULL on STN
AN 2004:51745 USPATFULL
TI Cross-linkers with high reactivity and solubility and their use in the preparation of conjugates for targeted delivery of small molecule drugs
IN Widdison, Wayne Charles, Somerville, MA, UNITED STATES
PA Immunogen, Inc. (U.S. corporation)
PI US 2004039176 A1 20040226
US 6913748 B2 20050705
AI US 2003-633616 A1 20030805 (10)
PRAI US 2002-403652P 20020816 (60)
DT Utility
FS APPLICATION
LREP SUGHRUE MION, PLLC, 2100 PENNSYLVANIA AVENUE, N.W., WASHINGTON, DC, 20037
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 8 Drawing Page(s)
LN.CNT 1518
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed is a method of making conjugates of cell binding agents and small molecule drugs comprising reacting a cell binding agent with a bifunctional cross-linking moiety to thereby provide the cell binding agent with a reactive disulfide group and then reacting the modified cell binding agent with a small molecule drug comprising a free thiol group. Bifunctional cross-linking moieties are also disclosed.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 4 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2003:571124 CAPLUS
DN 139:127976
TI Screening for antiviral agents based on inhibition of binding of nucleocapsid 7 protein to the ψ site oligonucleotide of HIV-1 RNA
IN Beuchter, Douglas; Hou, Xiaohong; Marlor, Christopher W.; Rice, William G.; Yang, Wengang
PA Achillion Pharmaceuticals, Inc., USA
SO PCT Int. Appl., 105 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003060098	A2	20030724	WO 2003-US801	20030110
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2003198648	A1	20031023	US 2003-339217	20030109
PRAI	US 2002-347369P	P	20020111		

OS MARPAT 139:127976
AB The present invention relates to methods of identifying a mol. from a library of mols. that inhibits binding of human **immunodeficiency** virus nucleocapsid 7 polypeptide (NCp7) to an oligonucleotide comprising the ψ site of HIV-1 virus. Thus, an NCp7 polypeptide is admixed with at one labeled HIV-1 ψ-site oligonucleotide and an amount of the mol. to

be tested under binding conditions. A decrease in the amount of oligonucleotide bound in the presence of the mol. compared with the amount of oligonucleotide bound in the absence of the mol. indicates that the mol. inhibits binding of NCp7 polypeptide to the oligonucleotide. The inhibiting agents may be used for treating HIV infection and/or inhibiting HIV viral replication (no data).

L7 ANSWER 5 OF 19 USPATFULL on STN
AN 2003:282307 USPATFULL
TI Methods for identifying compounds which inhibit binding of nucleocapsid 7 protein to HIV-1 RNA
IN Buechter, Douglas, Killingworth, CT, UNITED STATES
Hou, Xiaohong, Guilford, CT, UNITED STATES
Rice, William G., Madison, CT, UNITED STATES
Marlor, Christopher W., Bethany, CT, UNITED STATES
Yang, Wengang, Branford, CT, UNITED STATES
PI US 2003198648 A1 20031023
AI US 2003-339217 A1 20030109 (10)
PRAI US 2002-347369P 20020111 (60)
DT Utility
FS APPLICATION
LREP HALE AND DORR LLP, 300 PARK AVENUE, NEW YORK, NY, 10022
CLMN Number of Claims: 52
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 2333
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to methods of identifying a molecule from a library of molecules that inhibits binding of human **immunodeficiency** virus nucleocapsid 7 polypeptide (NCp7) to an oligonucleotide which comprises admixing an NCp7 polypeptide with at one labeled HIV-1 psi-site oligonucleotide and an amount of the molecule to be tested under binding conditions; and determining the amount of oligonucleotide bound to the NCp7 polypeptide, wherein a decrease in the amount of oligonucleotide bound in the presence of the molecule compared with the amount of oligonucleotide bound in the absence of the molecule indicates that the molecule inhibits binding of NCp7 polypeptide to the oligonucleotide.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 6 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 2002:539531 CAPLUS
DN 137:103886
TI Method of **immunomodulation** using thione-forming disulfides
IN Grassetti, Davide R.; Moro, Camillo
PA USA
SO PCT Int. Appl., 64 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002055080	A2	20020718	WO 2002-US795	20020110
	WO 2002055080	A3	20031204		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	EP 1383499	A2	20040128	EP 2002-705749	20020110
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,				

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

US 2004265327 A1 20041230 US 2002-44463 20020110
PRAI US 2001-260943P P 20010110
WO 2002-US795 W 20020110
OS MARPAT 137:103886
AB The invention discloses the methods of modulating an **immune** response in an individual by administration of a thione-forming disulfide (TFD). The thione-forming disulfide compds. R-S-S-R (R= aromatic heterocycle with neg. substituents, cyclic group having at least one 5 or 6 membered heterocycle ring with each ring with at least one nitrogen and optionally N, O or S; R comprises a pyridinyl, pyrimidinyl, thiazolyl or quinolinyl group). **Immunomodulatory** responses include, increased natural killer cell activity, expansion of NK cell population, decreased B cell population, decreased antibody production, and increased mitogenic potential. Methods of modulating such **immune** responses and the uses of **immunomodulation** are also provided.

L7 ANSWER 7 OF 19 USPATFULL on STN
AN 2001:1881 USPATFULL
TI High surface density covalent immobilization of oligonucleotide monolayers using a 1-(thiotrifluoroacetato)-11-(trichlorososilyl)-undecane linker
IN Thompson, Michael, 182 Moore Avenue, Toronto, Ontario, Canada M4T 1V8
McGovern, Mark E., 25 Clearside Place, Etobicoke, Ontario, Canada M9R 2G7
PI US 6169194 B1 20010102
AI US 1997-951448 19971016 (8)
DT Utility
FS Granted
EXNAM Primary Examiner: Ceperley, Mary E.
LREP Ridout & Maybee
CLMN Number of Claims: 1
ECL Exemplary Claim: 1
DRWN 6 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1371
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Oligonucleotides and other biomolecules are immobilized in high density on solid substrates through covalent forces using either a permanent thioether bond, or a chemoselectively reversible disulfide bond to a surface thiol. Substrates which have hydroxyl groups on their surfaces can be first silanized with a trichlorosilane containing 2-20 carbon atoms in its hydrocarbon backbone, terminating in a protected thiol group. The oligonucleotides or other biomolecules are first connected to a tether consisting of a hydrocarbon or polyether chain of 2-20 units in length which terminates in a thiol group. This thiol may be further modified with a halobenzylic-bifunctional water soluble reagent which allows the conjugate to be immobilized onto the surface thiol group by a permanent thioether bond. Alternatively, the oligonucleotide-tether-thiol group can be converted to a pyridyldisulfide functionality which attaches to the surface thiol by a chemoselectively reversible disulfide bond. The permanently bound oligonucleotides are immobilized in high density compared to other types of thiol functionalized silane surfaces and to the avidin-biotin method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 8 OF 19 USPATFULL on STN
AN 2000:167743 USPATFULL
TI High surface density covalent immobilization of oligonucleotide monolayers
IN McGovern, Mark, 25 Clearside Place, Etobicoke, Canada M9R 2G7
Thompson, Michael, 170 College Street, Toronto, Canada M5S 3E3
PI US 6159695 20001212
AI US 1999-301287 19990428 (9)
RLI Continuation-in-part of Ser. No. US 1997-951448, filed on 16 Oct 1997
DT Utility
FS Granted
EXNAM Primary Examiner: Brusca, John S.; Assistant Examiner: Lundgren, Jeffrey

S
LREP Ridout & Maybee
CLMN Number of Claims: 9
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 5 Drawing Page(s)
LN.CNT 1622
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Oligonucleotides and other biomolecules are immobilized in high density on solid substrates through covalent forces using either a permanent thioether bond, or a chemoselectively reversible disulfide bond to a surface thiol. Substrates which have hydroxyl groups on their surfaces can be first silanized with a trichlorosilane containing 2-20 carbon atoms in its hydrocarbon backbone, terminating in a protected thiol group. The oligonucleotides or other biomolecules are first connected to a tether consisting of a hydrocarbon or polyether chain of 2-20 units in length which terminates in a thiol group. This thiol may be further modified with a halobenzylic-bifunctional water soluble reagent which allows the conjugate to be immobilized onto the surface thiol group by a permanent thioether bond. Alternatively, the oligonucleotide-tether-thiol group can be converted to a pyridyldisulfide functionality which attaches to the surface thiol by a chemoselectively reversible disulfide bond. The permanently bound oligonucleotides are immobilized in high density compared to other types of thiol functionalized silane surface and to the avidin-biotin method.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 9 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN DUPLICATE 1
AN 1999:794242 CAPLUS
DN 132:30812
TI Method for identifying and using compounds that inactivate HIV-1 and other retroviruses by attacking highly conserved zinc fingers in the viral nucleocapsid protein
IN Henderson, Louis E.; Arthur, Larry O.; Rice, William G.; Rein, Alan R.
PA United States of America as Represented by the Department of Health and Human Services, USA
SO U.S., 30 pp., Cont.-in-part of U.S. Ser. No. 312,331, abandoned.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6001555	A	19991214	US 1995-379420	19950127
PRAI	US 1994-312331	B2	19940923		

OS MARPAT 132:30812
AB The present invention provides several classes of compds. which can be used to inactivate retroviruses, e.g. HIV-1, by attacking the CCHC zinc fingers of the viral nucleocapsid protein and ejecting the zinc therefrom. In addition, kits for identifying compds. that can react with CCHC zinc fingers of the nucleocapsid proteins of a large number of different retroviruses have also been developed. The kits of the present invention describe a set of specific tests and reagents that can be used to screen and identify compds. based on their ability to react with and disrupt retroviral zinc fingers in the viral NC proteins and, in turn, inactivate the retrovirus of interest.
RE.CNT 28 THERE ARE 28 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 10 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1997:400033 CAPLUS
DN 127:31253
TI Stabilization of IgM-containing reagent solution with reducing agents and sulfhydryl-modifying agents for **immunoassay** of IgM-type antibodies
IN Yoshimura, Toru
PA Dainabot Co., Ltd., Japan
SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF
DT Patent
LA Japanese
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 09127112	A2	19970516	JP 1995-303302	19951030
PRAI	JP 1995-303302		19951030		

AB An IgM-containing reagent solution to be used in the **immunoassay** for the determination of IgM-type antibodies against hepatitis A virus or hepatitis B virus core antigen is stabilized by modifying the IgM reagent with a group of reducing agents and free SH group-reactive agents.

L7 ANSWER 11 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1996:422386 CAPLUS
DN 125:76341
TI A method for identifying and using compounds that inactivate HIV-1 and other retroviruses by attacking highly conserved zinc fingers in the viral nucleocapsid protein
IN Henderson, Louis E.; Arthur, Larry O.; Rice, William G.
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 58 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9609406	A1	19960328	WO 1995-US11915	19950919
	W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM				
	RW: KE, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
	AU 9535927	A1	19960409	AU 1995-35927	19950919
	EP 782632	A1	19970709	EP 1995-933161	19950919
	EP 782632	B1	20030416		
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE				
	AT 237695	E	20030515	AT 1995-933161	19950919
PRAI	US 1994-312331	A	19940923		
	WO 1995-US11915	W	19950919		

OS MARPAT 125:76341
AB Several classes of compds. (disulfides, maleimides, α-halogenated ketones, hydrazides, nitric oxide and NO-containing derivs., cupric ions and complexes thereof, ferric ions and complexes thereof) are provided which can be used to inactivate retroviruses, e.g. HIV-1, by attacking the CCHC zinc fingers of the viral nucleocapsid protein and ejecting the zinc therefrom. In addition, kits for identifying compds. that can react with CCHC zinc fingers of the nucleocapsid proteins of a large number of different retroviruses have also been developed. The kits of the present invention describe a set of specific tests and reagents that can be used to screen and identify compds. based on their ability to react with and disrupt retroviral zinc fingers in the viral NC proteins and, in turn, inactivate the retrovirus of interest. The effect of e.g. disulfides on HIV-1 is included.

L7 ANSWER 12 OF 19 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1989:243670 BIOSIS
DN PREV198987124735; BA87:124735
TI N ETHYLMALEIMIDE DIFFERENTIALLY AFFECTS ADENOSINE AND THYMIDINE UPTAKE BY RAT THYMOCYTES.
AU KRZYSTYNIAK K [Reprint author]; FOURNIER M; RYZEWSKI J
CS UNIV DU QUE A MONTREAL, PQ H3C 3P8, CAN
SO Archivum Immunologiae et Therapiae Experimentalis, (1988) Vol. 36, No. 3, pp. 287-294.

CODEN: AITEAT. ISSN: 0004-069X.
DT Article
FS BA
LA ENGLISH
ED Entered STN: 20 May 1989
Last Updated on STN: 28 Jun 1989
AB The involvement of membrane sulfhydryl groups in the uptake of adenosine and thymidine was examined in rat thymocytes pretreated with 6,6'-dithiodinicotinic acid (CPDS) and N-ethylmaleimide (NEM). CPDS, which is known to react uniquely with external membrane sulfhydryls, under short incubation conditions, did not significantly affect the uptake of adenosine and thymidine. Formation of cAMP in nonstimulated and adenosine-stimulated cells was also unaltered by CPDS. However, inhibition of adenosine uptake by competitive inhibitor, dipyridamole, was significantly stronger when the cells were pretreated with CPDS. Preincubation of cells with NEM showed differential sensitivity of adenosine and thymidine uptake, depending on concentration of this sulfhydryl alkylating agent. The results suggest the involvement of NEM-accessible sulfhydryls in membrane transport of adenosine and thymidine. Dual effect of NEM on nucleoside transport may be related to the complexity of nucleoside carrier(s) or to the existence of different nucleoside carriers within thymocyte membranes. On the other hand, the easily accesible, external membrane -SH groups which can blocked with CPDS, are not essential in thymocyte nucleoside transport but they appear to be situated at a site which interacts with the membrane transport system of nucleoside.

L7 ANSWER 13 OF 19 USPATFULL on STN
AN 87:15346 USPATFULL
TI Method for splitting di-sulphide bonds and a compound obtained thereby
IN Axen, Rolf E., Upplands Balinge, Sweden
Carlsson, Jan P., Upsala, Sweden
Drevin, Hakan N., Upsala, Sweden
PA Pharmacia Aktiebolag, Uppsala, Sweden (non-U.S. corporation)
PI US 4647655 19870303
WO 8404525 19841122
AI US 1985-700819 19850116 (6)
WO 1984-SE186 19840516
19850116 PCT 371 date
19850116 PCT 102(e) date
PRAI SE 1983-2758 19830517
DT Utility
FS Granted
EXNAM Primary Examiner: Schain, Howard E.
LREP Philpitt, Fred
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 827
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB There is described a method for splitting at least one disulphide bond --S--S--, where each of the sulphur atoms is directly bound covalently to its respective aliphatic carbon atom in an organic substance which contains at least one such disulphide bond, in which each bond --S--S-- which is split is converted substantially to two reactive groups of the formulae --S--S--R.sub.1 and R.sub.2 --S--S--, where R.sub.1 and R.sub.2 are equal or different and each is an organic residue. Splitting of the bond is effected by reacting said organic substance with a mixture of a compound R.sub.3 --S--S--R.sub.4 and a compound capable of existing in the tautomeric forms R.sub.5 --S--H and HR.sub.5 .dbd.S or corresponding resonance-stabilized anion forms, in which compounds the residues R.sub.3, R.sub.4 and R.sub.5 (i) are organic residues of which all are different, two are equal or all are equal, and (ii) are defined in (a) that each of the aforesaid sulphur atoms in the compounds R.sub.3 --S--S--R.sub. 4 and R.sub.5 --S--H is bound to a carbon atom in an aromatic ring and (b) that under prevailing splitting conditions a compound R.sub.3 --S--H or R.sub.4 --S--H released by the reaction of the compound R.sub.3 --S--S--R.sub.4 and the compound R.sub.5 --S--H

exist substantially in their tautomeric forms HR.sub.3 '.dbd.S, HR.sub.4 '.dbd.S and HR.sub.5 '.dbd.S respectively, or corresponding resonance-stabilized anion forms. In each of the groups --S--S--R.sub.1 and R.sub.2 --S--S-- produced by splitting the disulphide bond, R.sub.1 and R.sub.2 are each a residue of the group which consists of R.sub.3, R.sub.4 and R.sub.5. The invention also relates to an organic compound produced by the aforesaid splitting and exhibiting at least one group --S--S--R.sub.1 and/or R.sub.2 --S--S-- bound covalently to an aliphatic carbon atom, in which groups R.sub.1 and R.sub.2 have the aforegiven significance.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 14 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1985:163383 CAPLUS
DN 102:163383
TI Splitting disulfide bonds and a compound obtained thereby
IN Axen, Rolf Erik Axel Verner; Carlsson, Jan Per Erik; Drevin, Haokan Nils Yngve
PA Pharmacia AB, Swed.
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 8404525	A1	19841122	WO 1984-SE186	19840516
	W: JP, US				
	SE 8302758	A	19841118	SE 1983-2758	19830517
	EP 128885	A1	19841219	EP 1984-850153	19840516
	EP 128885	B1	19871021		
	R: AT, BE, CH, DE, FR, GB, IT, LI, LU, NL, SE				
	JP 60501310	T2	19850815	JP 1984-502191	19840516
	JP 05061279	B4	19930906		
	AT 30314	E	19871115	AT 1984-850153	19840516
	US 4647655	A	19870303	US 1985-700819	19850116
PRAI	SE 1983-2758	A	19830517		
	EP 1984-850153	A	19840516		
	WO 1984-SE186	W	19840516		

AB A method is described for splitting disulfide bonds in aliphatic thiols, such as enzymes, Igs, antibodies, agarose, and polypeptides, and in low-mol.-weight compds. such as cystine, in which the splitting is effected by reacting the mol. containing the aliphatic disulfide bond with a mixture of a compound R3-S-S-R4 and a compound which can exist in the tautomeric forms R5-S-H and HR'5 = S or the corresponding resonance-stabilized anion form, in which R3, R4, and R5 are organic residues which may be the same or different. Splitting is pH-dependent and is carried out in aqueous media at pH 5-12. The method also involves conjugates produced from the obtained products and which can be conjugated to a carrier, therapeutically active compds., or used for **immunizing** purposes. Thus, IgG antibodies produced in sheep were incubated with 5 mM 2,2'-dipyridyl disulfide and different concns. of 2-thiopyridone for 24 h at 23°. The reaction mixture was then separated on columns containing dextran crosslinked with epichlorohydrin. The protein fractions were collected and the content of the groups that could be split to 2-thiopyridone was determined

L7 ANSWER 15 OF 19 USPATFULL on STN
AN 80:55300 USPATFULL
TI Reagent for use in **immunochemical** assay methods
IN Carlsson, Jan P. E., Upsala, Sweden
Axen, Rolf E. A. V., Balinge, Sweden
Drevin, Hakan N. Y., Brunna, Sweden
PA Pharmacia Diagnostics AB, Upsala, Sweden (non-U.S. corporation)
PI US 4232119 19801104
AI US 1978-882545 19780302 (5)
PRAI SE 1977-2464 19770304
DT Utility

FS Granted
EXNAM Primary Examiner: Shapiro, Lionel M.
LREP Philpitt, Fred
CLMN Number of Claims: 5
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 829
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A reagent for use in **immunochemical** assay methods carried out in the presence of an aqueous liquid, which reagent comprises a conjugate of one or more molecules of **immunoglobulin** and one or more units of an analytically indicatable group which molecules and units are bound together via bridges containing the group, --S--S--, said conjugate being soluble in said aqueous liquid.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L7 ANSWER 16 OF 19 CAPLUS COPYRIGHT 2005 ACS on STN
AN 1979:18766 CAPLUS
DN 90:18766
TI Reagents used in **immunochemical** analytical methods
IN Carlsson, Jan Per Erik; Axen, Rolf Erik Axel Verner; Drevin, Haakan Nils Yngve
PA Pharmacia Diagnostics AB, Swed.
SO Ger. Offen., 36 pp.
CODEN: GWXXBX
DT Patent
LA German
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2808476	A1	19780907	DE 1978-2808476	19780228
	DE 2808476	C2	19861106		
	SE 7702464	A	19780905	SE 1977-2464	19770304
	SE 427505	B	19830411		
	SE 427505	C	19830721		
	US 4232119	A	19801104	US 1978-882545	19780302
	FR 2382695	A1	19780929	FR 1978-6163	19780303
	FR 2382695	B1	19840713		
	GB 1597754	A	19810909	GB 1978-8451	19780303
	JP 53130423	A2	19781114	JP 1978-24064	19780304
	JP 61045775	B4	19861009		
	NL 7802451	A	19780906	NL 1978-2451	19780306
	NL 188544	B	19920217		
	NL 188544	C	19930916		
PRAI	SE 1977-2464	A	19770304		

AB **Immunochem**. reagents are prepared by attaching readily detectable mols. (enzymes, chromophores, or radioactive labels) to **immunochem** . reactive mols. (Igs) by thiolation of each component followed by disulfide bond formation. E.g., 6 mg α-amylase (I) was dissolved in 2 mL 0.1M $NaHCO_3$, sparged and blanketed with N_2, and mixed with 3 mg Me 4-mercaptobutyrimidate-HCl (II). After 30 min, thiolated I was separated from low-mol.-weight compds. by gel filtration and analyzed for SH content; it contained 1.4 mol SH/mol protein. Similar treatment of 10 mg sheep anti-rabbit antibodies (III) with 0.25 mg II gave thiolated III containing 1.2 mol SH/mol protein. Thiolated I (in .apprx.3 mL 0.1M NaH_2PO_4) was mixed with 1 mL 8 mM bis-5-(carboxy-2-pyridyl)-disulfide. After 2 h at 23°, the reaction mixture was dialyzed to give a I derivative containing 1.0 mol carboxypyridyldisulfide/mol protein. Thiolated III in .apprx.3 mL 0.1M NaH_2PO_4 was mixed with the disulfide derivative of I (also in .apprx.3 mL 0.1 M NaH_2PO_4) and incubated with shaking for 10 h at 23°. Gel filtration of the reaction mixture gave a bimol. conjugate containing 40% of the I activity added to the mixture An example of an **immunoassay** using such an enzyme-anbibody conjugate is given.

L7 ANSWER 17 OF 19 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1976:223043 BIOSIS

DN PREV197662053043; BA62:53043
TI INTERACTION OF 6 6 DI THIO DI NICOTINIC-ACID WITH RAT THYMOCYTES PRE TREATED WITH THIOL COMPOUNDS.
AU KRZYSTYNIAK K; ROSZKOWSKI-SLIZ W; RYZEWSKI J
SO Archivum Immunologiae et Therapiae Experimentalis, (1976) Vol. 24, No. 1, pp. 109-114.
CODEN: AITEAT. ISSN: 0004-069X.
DT Article
FS BA
LA Unavailable
AB The number of sulfhydryl groups in the membranes of rat thymocytes were determined, and expressed in terms of concentration of 6-mercaptonicotinic acid produced by reduction of 6,6'-dithiodinicotinic acid. The influence of incubation of thymocytes in solutions of L-cysteine, reduced glutathione and dithiothreitol on the number of -SH groups was studied. About 2-fold higher degree of reduction of 6-6'dithiodinicotinic acid was observed in the reaction with thymocytes incubated previously in a 2 mM solution of L-cysteine in comparison with controls. Incubation of thymocytes with dithiothreitol and glutathione had no effect on the number of -SH groups.

L7 ANSWER 18 OF 19 EMBASE COPYRIGHT 2005 ELSEVIER INC. ALL RIGHTS RESERVED. on STN
AN 76076687 EMBASE
DN 1976076687
TI Change in **immunosensitivity** of Yoshida sarcoma produced by chemical modification of cell surface membrane.
AU Iwaguchi T.; Hozumi T.
CS Div. Cancer Chemother., Cancer Inst., Toshimaku, Tokyo, Japan
SO Gann, The Japanese Journal of Cancer Research, (1975) Vol. 66, No. 2, pp. 155-158.
CODEN: GANNA2
DT Journal
FS 037 Drug Literature Index
016 Cancer
LA English
DATA NOT AVAILABLE FOR THIS ACCESSION NUMBER

L7 ANSWER 19 OF 19 BIOSIS COPYRIGHT (c) 2005 The Thomson Corporation on STN
AN 1972:8997 BIOSIS
DN PREV197208008997; BR08:8997
TI CELL SURFACE POISONS AS POTENTIAL **IMMUNO** SUPPRESSIVE AGENTS.
AU WHITEHOUSE M W; DROGE M M
SO Pharmacologist, (1971) Vol. 13, No. 2, pp. 236.
CODEN: PHMCAA. ISSN: 0031-7004.
DT Article
FS BR
LA Unavailable